

Landscape Management and Governance, Gomole Rangeland, Ethiopia

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ILRI Case Study Report

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Contents

Executive Summary	ii
Acknowledgements and disclaimer	v
Abbreviations and acronyms	vi
1 Introduction	1
2 Objective	2
3 Methods and Study Area	2
3.1 REVIEWING SECONDARY SOURCES	2
3.2 PRIMARY DATA COLLECTION.....	3
3.3 DESCRIPTION OF THE STUDY AREA	5
4 Findings	6
4.1 CHARACTERIZATION OF MANAGEMENT AND GOVERNANCE	6
4.1.1 <i>Overview</i>	6
4.1.2 <i>Definition of the Landscape</i>	7
4.1.3 <i>Authority and Governance Powers of the Landscape-level Institution/Process</i>	7
4.1.4 <i>Governance by whom?</i>	9
4.1.5 <i>Multi-level Planning Approach</i>	9
4.1.6 <i>Involvement of Women</i>	11
4.2 DIFFERENCE IN OPINION AMONG GOVERNMENT OFFICIALS ON CUSTOMARY NRM.....	12
4.3 EXISTING OPPORTUNITIES FOR BETTER NRM.....	12
4.4 ROLE OVERLAP IN NRM DECISION	13
4.5 COMMUNAL NRM AND DECISION-MAKING IN BORANA.....	13
5 Discussion.....	14
References.....	18

Executive Summary

The key pillars of development plans for most developing nations are poverty eradication, sustainable economic growth and environmental sustainability. On one hand, scholars are arguing that natural resources are fundamental for improving livelihoods and achieving sustainable development. On the other hand, how best to manage natural resources to improve livelihoods, reduce poverty and advance economic growth sustainably remains an elusive goal and daunting challenge for research, education, development practices, community actions and policy.

Borana pastoral communities were known in the Greater Horn of African for their efficiency of rangeland management and livestock production by developing a landscape/*Dheeda* level natural resources management (NRM) institution/system since time immemorial. This *Dheeda*/landscape-based management coupled with their indigenous environmental knowledge has proven the viability of their livelihood which is founded on the specialty of livestock (especially cattle) husbandry.

An array of causative factors—inappropriate development policy and development interventions, political marginalization, lack of communal land rights, rangeland fragmentation, weakening of customary institution pertinent to NRM, derivative effects of the changing climate coupled with the mismanagement of natural resources driven conflict among neighboring pastoral groups—have now combined to compromise the viability of Borana pastoral livelihoods for the past three to four decades.

A number of projects have been designed and implemented on NRM by international and national NGOs and UN agencies in the pastoral areas of southern Ethiopia, particularly in the Borana Zone of Oromia Region. On the whole, neither the Government nor the development actors are coordinating those fragmented approaches to bring about holistic solutions.

The International Livestock Research Institute (ILRI) and the Pastoralist Areas Resilience Improvement through Market Expansion (PRIME) project have recognized that some of these approaches might work while some may not. PRIME has been working to design its activities in a way that is informed by research and that reflects an appreciation for the integration of the different dimensions of sustainability, resilience improvement and livelihoods through market expansion.

The rationale of this case study is based on the observations of the operations of humanitarian organizations working in pastoral/agro-pastoral communities and the lessons learned from those interventions. With that in mind, this case study was done in Borana, southern Ethiopia on a traditionally defined rangeland unit to assess management and governance systems. Data collection was done from October 2014 to February 2015 in three separate field work periods.

Study Approaches, Methods and Tools

The methodology and tools applied are defined by the Terms of Reference (TOR) using incorporated literature reviews (policy and strategy papers, research findings, etc.), community consultations, communicating with selective key persons and with the observation of implemented best practices by stakeholders in the Yabello and Arero Woreda context. In Borana geographic terminology, *dheedas* (large rangeland landscapes) are made up of a number of *reeras*. For this research, six focus group discussions (FGDs) with community groups in sampled Reeras (six out of ten) and sub-kebeles were conducted. These FGDs incorporated both men and women, and included 156 participants in FGDs and 17 individuals in key informant interviews (KIIs) who were consulted as Key Informant Interviewees (KIIs) using qualitative, semi-structured questionnaires and fact sheets.

Findings

Gomole Dheeda is one of the five traditionally defined Borana rangelands, and straddles two woredas: Yabello and Arero. Fourteen of the 21 kebeles in Arero and 15 of the 23 kebeles in Yabello are within Gomole rangeland. The name Gomole was derived from the *Afaan Oromo* word *Goomaa* meaning 'better off' in that is the best quality rangeland out of the five within the Dirre plateau. In terms of its unique characteristics, the rangeland has diversified vegetation cover with ambient climatic conditions that suit both human and livestock populations.

The altitude of the Gomole area ranges from 1200m, 1400m and 1900m a.s.l. in the west, central and eastern portions respectively. Hence, aridity increases to the western reeras while humidity increases from central to eastern reeras. Such variation in altitude has attributed to different biodiversities both in terms of flora and fauna and the endowment of indigenous birds, particularly in the eastern directions, and in two traditionally known forest areas; one each in the east and central Reeras. According to the community, due to its relative geographical position and vegetation cover, the rangeland is resilient against prolonged dry and wet seasons and climatic variation. In addition, it provides better livestock productivity due to its inherent environmental characteristics. Gomole is also an important rangeland unit that also acts as a cultural corridor for the local community where the Raba-Gada and the *Gadamojji* live. Moreover, it is a central rangeland unit with potential market accessibility for three out of the four known livestock market outlets which include Bakke, Surupha, Elweya and Dida Hara.

The current initiative (PRIME) was based on customarily defined rangeland. In line with this, Gomole *Dheeda* was selected as a pilot project to build resilience of pastoral livelihoods through appropriate NRM channels at landscape level with future plans to scale up based on the success of the current project. So far through participatory resource mapping and community dialogue, resources were identified and digitized. After about four decades of decline in their rangeland management role, the customary institutions for NRM were rebuilt. The currently institution has three structures: *Arda/PA*, *Reera* and *Dheeda*. At the PA (peasant/pastoralist association, i.e., kebele) level, there are eight (8) committee members selected: PA leader and security and administration officer from the government structure, four elders through community dialogue done by PRIME, and 1-2 women representatives.

In terms of governance power, the currently instituted *Dheeda* management committee formed by PRIME does not have decision making power as the council is not yet recognized by formal government. It holds an advisory role rather than having full management responsibility. As the Gomole landscape is found in two woredas, it was largely governed by the woreda administrations, and below them kebeles, while the community was represented through respective kebele representatives as per the new management committee. Development planning is primarily done at the region level which is a higher level than the landscape level, while the context planning is done at the respective woreda which is lower than the landscape. Women are represented on the management committee at arda/kebele level.

The research included an examination of the status of the current *Dheeda* management committee, and challenges posed on the committee, for sustainable NRM as well as its implication on the dryland ecosystem; some of aspects of which are unique to Gomole, while others are more common to all Borana rangelands. These implications include lack of recognition by formal governance, absence of policy for communal land tenure systems, current sectoral planning practices, presence of different clans with indifferent settlement culture and species preference and a top-down approach to NRM.

All the above-mentioned problems have independent and cumulative effects on a dryland environment that compromises the viability of pastoral livelihoods in the Borana area by aggravating environmental degradation. Hence, a landscape level to NRM for inclusive management where local people identify and prioritize their own problems through effective participation and get involved in

decision making is recommended. To realize this, there is a need for all stakeholders to revise their role and change their current decision-making practices to facilitate the current PRIME is doing.

Acknowledgements and disclaimer

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Disclaimer

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Abbreviations and acronyms

asl	Above sea level
CC	Climate Change
DA	Development Agent
FGD	Focus Group Discussion
ha	Hectare
ILRI	International Livestock Research Institute
KIIs	Key Informant Interviews
NRM	Natural Resource Management
PRIME	Pastoralist Areas Resilience through Market Expansion

I Introduction

The key pillars of development plans for most developing nations are poverty eradication, sustainable economic growth and environmental sustainability. On one hand, scholars are arguing that natural resources are fundamental for improving livelihoods and achieving sustainable development. On the other hand, how best to manage natural resources to improve livelihoods, reduce poverty and advance economic growth sustainably remains an elusive goal and daunting challenge for research, education, development practice, community actions and policy (Washington et al., 2010).

Ethiopia has workable development policies pertinent to natural resources management (NRM). However, recent research has found that the existing policies, proclamations and guidelines are not practically well harmonized and implemented with pastoralist/agro-pastoralist way of life in mind (Boku & Irwin 2003). Moreover, Lakew, Desta et al. (2005) have shown that the use of top-down approaches and rigid technical packages during the 1980s resulted in unsatisfactory performance of several conservation efforts.

Borana pastoral communities were known in the Greater Horn of African pastoral communities for their efficiency of rangeland management and livestock production by developing a landscape/Dheeda level NRM institution/system since time immemorial. This Dheeda/landscape-based management coupled with their indigenous environmental knowledge has proved the viability of their livelihood which is founded on the specialty of livestock/cattle husbandry. The Dheeda-level NRM played a major role in dividing these rangeland units into dry and wet season grazing units to be used in conjunction with their mobility strategy. This *Dheeda*-level rangeland division, grounded on particular environmental characteristics and its management at landscape level, has made these livelihoods resilient against external shocks.

An array of causative factors—inappropriate development policy and development interventions, political marginalization, lack of communal land rights, rangeland fragmentation, weakening of customary institution pertinent to NRM, derivative effects of the changing climate coupled with the mismanagement of natural resources driven conflict among neighboring pastoral groups—have now combined to compromise the viability of Borana pastoral livelihoods for the past three to four decades.

The weakening of landscape-level NRM has put a great challenge on the rangeland productivity due to ever-changing land use resulting from the expansion of agriculture in potential grazing areas. Another challenge to rangeland productivity is that bush encroachment has increased the vulnerability of the Borana pastoral community more than ever.

A number of projects have been designed and implemented on NRM by international and national NGOs and UN agencies in the pastoral areas of southern Ethiopia, particularly in the Borana Zone of Oromia Region (Jarso Doyo 2011). On the whole, neither the Government nor the development actors are coordinating those fragmented approaches to bring about holistic solutions.

An understanding of the current pastoral challenges and the existing potential opportunities for the enhancement of resilient pastoral livelihoods through long-term development intervention by leading humanitarian organizations led to the design of the Pastoralist Areas Resilience Improvement through Market Expansion (PRIME) project.

The International Livestock Research Institute (ILRI) and PRIME have recognized that some of the approaches might work while others may not. PRIME has been working to design its activities in a way that is informed by research and that reflects an appreciation and integration of the different dimensions of sustainability, resilience improvement and livelihoods through market expansion.

The current effort is on Gomole landscape level NRM rangeland development initiatives, opportunities and challenges in specific sites, with specific communities. The goal is to implement a fully integrated framework that promotes solutions for livelihood improvement by keeping the balance between development and sustainability, while simultaneously broadening the knowledge of sustainable development to take a more people-centred approach.

Moreover, PRIME believes that, in the pursuit of sustainable livelihoods, poor people and resource user communities have the capacity to develop institutions and strategies to regulate, protect and improve the use and management of their of natural resources by recognizing the interconnections and associations between NRM, poverty and livelihoods.

The rationale of this case study is based on the observations of the operations of humanitarian organizations working in pastoral/agro-pastoral communities and the lessons learned from those interventions. With that in mind, this case study was done in Borana, southern Ethiopia on a traditionally defined rangeland unit to assess management and governance systems where Dheeda level rangeland management is being applied. Data collection was done from October 2014 to February 2015 in three separate fieldwork periods.

2 Objective

The two aims of the study were to characterize the organization of management and governance for the Gomole landscape and to explore the successes and challenges of the current system in place when implementing landscape level rangeland management.

This implementation included establishing the main governance issues that affect the successful incorporation of traditional resources management strategies within the contemporary management of the Gomole landscape. Particularly, I set out to establish:

1. What are the issues and challenges?
2. In what ways is planning top-down, bottom up, or both?
3. How are planning and governance for natural resources structured?
4. What role does the traditional institution, *Jarsa Dheeda* play in rangeland management planning in Gomole?
5. What have been the successes and challenges in legitimizing community-based management of rangelands at woreda and zonal levels?

3 Methods and Study Area

In order to achieve the study objective, a participatory research methodology was employed coupled with a review of past research findings.

3.1 Reviewing Secondary Sources

The country's relevant working policies, proclamations, guidelines and strategies pertinent to natural resource management as well as pastoral-oriented development intervention project documents were intensively reviewed. Other internet sources particularly journals, articles, research findings and books were also consulted to understand existing government direction on pastoralism and natural resources management.

3.2 Primary Data Collection

In order to plan for primary data collection through an agreed-upon methodology with the client (ILRI), a reconnaissance field visit was made and an introduction was done with local authority, PRIME staff as well as key traditional leaders. After the preliminary orientation to the Gomole rangeland unit was made, the field level research activities were continued in accordance with the outlined research schedule. First, Gomole Reeras were divided in consultation with PRIME workers at Yabello into western, central and eastern sections. Within each division, two FGDs were made with each community. To make the FGD more democratic, the FGDs were divided by gender. At the woreda level a FGD was also undertaken with government line departments: one per woreda (Arero and Yabello).

The KIs were designed in cooperation with PRIME officials. Before executing KIs the modern government institutions were identified and mapped. These divisions helped us to include stakeholders at zonal, woreda and PA levels. Key persons who have a direct relationship with rangeland systems and have the capacity to explain NRM and governance with regard to decision-making, interactions, gaps, constraints/challenges, were consulted for interviews.

The KIs are tiered from top to bottom, and all relevant and appropriate officials and experts (professionals) were consulted step-by-step from both traditional and formal lines. Replies from each were compared, re-compared and contrasted as to identify similarities (overlaps) and differences. A total of 18 KIs were conducted.

Table 1: Key Informant Interviews

I/N	Name	Remark	Date
1	Ato Wako Boru	Arero Woreda Documentation Head	30/10/2014
2	Boru Dida	Env'tal impact assessment process owner	28/10/2014
3	Ato Roba Halake	Arero Woreda Admin Head	28/10/2014
4	Ato Doyo Dullacha	Gomole Dheeda leader	28/10/2014
5	Guyo Goba	Current Abbaa Gada (72 th)	29/10/2014
6	Jilo Aga	68 th Abba Gada and final decision maker	20/01/2015
7	Ato Wogene Tadesse	Zone Land and Environmental protection process owner	27/10/2014
8	W/r Makiya Mohammed	Yabello Woreda PDO head	25/10/2014
9	Habtamu Saboka	Yabello Woreda NRM Expert	25/10/2014
10	Abba Rufa Jatani	Save the Children Yabello Field office (Head)	25/10/2014
11	Guyyo Bilala	Allona kebele manager	23/10/2014
12	Hussein Miyo	Acting guise for CCA and PRIME	21/10/2014
13	Mallichia Sora	DRR and Early warning specialist	21/10/2014
14	Wako Tunicha	NRM specialist (SOS Sahel Borana Field Office)	21/10/2014
15	Jatani Huka	Transport bureau Vice Head	28/10/2014
16	Duba Galgalo	Hunde Grassroot	25/10/2014
17	Bagajo Jatani	Action For Development	21/10/2014
18	Ato Borbor Bule	Hayuu	

Table 2: Summarized community FGD participants

I/N	Reera	Number of participants	Cluster
1	Cari Harboro	26	Western Gomole
2	Redi	13	Western
3	Haro Beke	18	Central
4	Dida Hara	21	Central
5	Allona	23	Eastern
6	Haro Dimtu	13	Eastern
	Total	114	

Table 3: Arero Woreda stakeholders FGD

I/N	Name	Office/ Organization	Position
1	Galma Duba	PDO	NRM expert
2	Abdi Qature	"	"
3	Abdi Mamadi	Save the children	NRM Expert
4.	Molu Sora	Community	Range land council
5.	Kilicha Arero	"	"
6.	Hassan Bulge	Community	PA leader
7	Wako Doti	Admin	expert
8	Gurumi Jamiru	Land use	expert
9	Ibrahim Adan	SOS SAHEL	NRM Expert
10	Sake Guyo	community	Range land council
11	Buke Jillo	Community	elder
12	Geda Jillo	Women affairs	expert
13	Guyo Wako	Community	elder
14	Qampicha Boru	community	elder
15	Guyo Doyo	PDO	Expert

Table 4: Yabello Woreda line department FGD

I/N	Name	Office
1	Habtamu Wakgari	Women Office
2	Alnur Mohammed	DRR officer
3	Roba Dhera	Land office
4	Daniel Yimer	PDO
5	Bizunesh Abera	Yabello Woreda Admin Office

3.3 Description of the Study Area

Gomole *Dheeda* is one of the five traditionally defined Borana rangelands, and straddles two woredas: Yabello and Arero. Fourteen of the 21 kebeles in Arero and 15 of the 23 kebeles in Yabello are within Gomole rangeland.

The name Gomole was derived from the *Afaan Oromo* word *Goomaa* meaning 'better off' in that is the best quality rangeland out of the five within the Dirre plateau. In terms of its unique characteristics, the rangeland has diversified vegetation cover with ambient climatic conditions that suit both human and livestock populations.

The rangeland unit is bordered by the Konso River to the west, a chain of mountains that differentiate it from the *Malbe* and *Dirre* rangelands to the southwest and south, and the *Wayama* rangeland to the southeast. To the east and north, the rangeland is also bordered by the Galaba seasonal river and the Seera seasonal river respectively.

The altitude of the Gomole area ranges from 1200m, 1400m and 1900m a.s.l. in the west, central and eastern portions respectively. Hence, aridity increases to the western reeras while humidity increases from central to eastern reeras. Such variation in altitude has attributed to different biodiversities both in terms of flora and fauna and the endowment of indigenous birds, particularly in the eastern directions, and in two traditionally known forest areas; one each in the east and central reeras. According to the community, due to its relative geographical position and vegetation cover, the rangeland is resilient against prolonged dry and wet seasons and climatic variation.

As per discussions with community members, during dry season when the local temperature increases, the wet wind from the northern highland area (now Guji) will buffer Gomole allowing for moderate temperatures in the rangeland. During the wet season, when temperatures usually fall, the hot wind from the *Malbe*, *Dirre* and *Wayama* regions that border the unit, contributes to the rangeland's moderate temperature. Hence, Gomole will have moderate temperatures (neither too hot nor too cold) both during the dry season and wet season.

In addition, it also provides better livestock productivity due to its inherent potential for grass types that are locally preferable and nutritious, resulting, as per the local community's perception, from its underground minerals. Moreover, Gomole is also an important rangeland unit that acts as a cultural corridor for the local community where the *Raba-Gada* and the *Gadamojji* live.

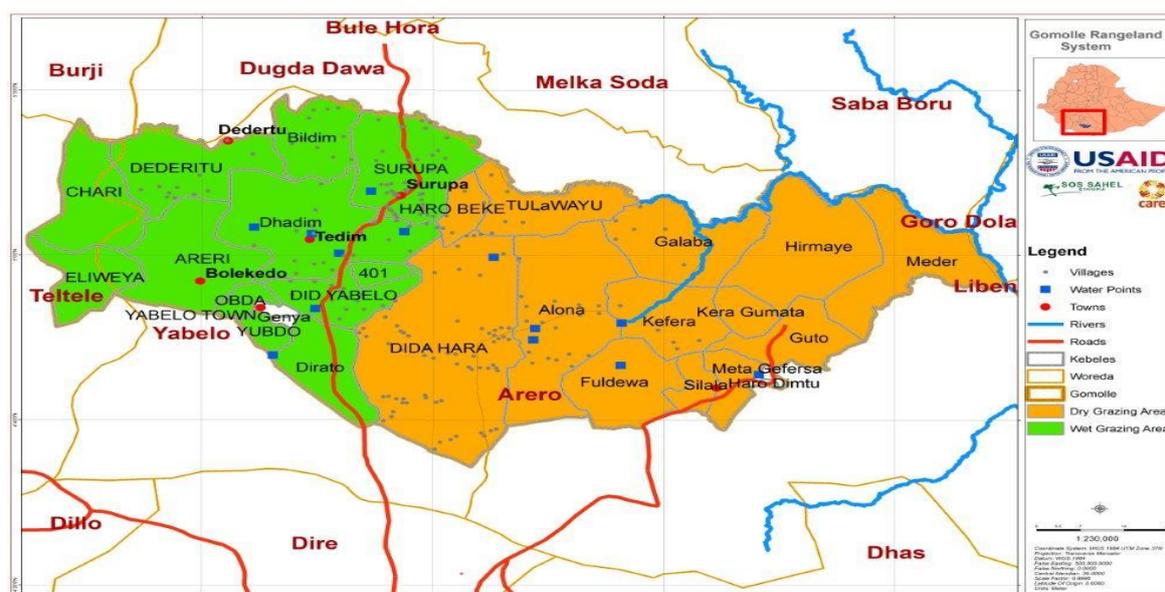


Fig 1: Gomole rangeland

Source: Adopted from PRIME

4 Findings

4.1 Characterization of Management and Governance

4.1.1 Overview

Pastoralism is the main livelihood system in drylands and in Ethiopia. It covers about 75% of the total area of which 62% is arid and semi-arid rangelands inhabited by pastoralists from different regions (Amaha Kassahun 2003). While the pastoral communities of Ethiopia constitute more than 12 % of the national population, the Borana pastoral communities in the southern Ethiopia constitute 7% of the total pastoral population (Fayera and Eyasu 2010).

The Borana pastoral communities have their own effective traditional institutions, laws, beliefs and cultural norms on natural resources management systems pertaining to the rangeland management. This local-level management practice is based on multiple rangeland units, with specific standards, classifications and nomenclature systems, which has been intensively researched. Most studies have revealed that the system is very compatible with scientific knowledge Oba et al., (2001) although it is not well understood by many including practitioners, policy-makers and development actors.

As a result of inappropriate administration systems imposed since the Dergue regime, landscape-level NRM has been less applied. Moreover, neglecting local knowledge and traditional wisdom are the other causes for failures of past development endeavors (Jarso Doyo 2011; Herand 2009). The current erosion and weakening of traditional pastoral institutions, norms and practices related to NRM in Borana, which is actually attributed to many complex reasons, has had enormous implications on sustainable development and NRM in Borana. Currently relevant national plans, policies, proclamations, regulations and guidelines also exhibit similar or general designs rather than specifics across the nation's varied ecological regions (Dawud and James 2014).

Therefore, at what scale should natural resources be managed and governed is less known or overlooked as a result of the lack of knowledge with dryland import. The resultant effects of increased demands over diminishing assets and lack of capacity and space for participatory resource planning of NRM often have triggered conflicts and the mismanagement of these resources. These effects and other natural and man-made factors have not only resulted in widespread ecological consequences including degradation of ecosystem goods and services, landscape fragmentation and unsustainable use of natural resources, but have aggravated the climate change-induced effects perpetuating the poverty and vulnerability of these pastoral areas like never before. The problem has now reached alarming proportions due to a range of internal and external conditions such as misconceptions, overpopulation, expansion of farming, the emergence of private enclosures, bush encroachment, expansion of investment projects, land grabbing and the effects of climate change. Without improving the scale of NRM under such ecological settings, sustainable development and poverty reduction efforts will be an unachievable goal of public policy.

An understanding of both the current issues, and the potential for further critical problems as learned by some organizations through past lessons have paved a way for the birth of the PRIME project that works with local people. By providing a fully integrated framework as a solution for livelihood improvements and keeping a balance between development, sustainability and the broadening knowledge of sustainable development, more people-centered approach can be implemented. Therefore, the case study was done where *Dheeda* level NRM is currently underway.

Table 5: Summary of Key Dimensions of Management and Governance

Management/Governance Dimension	Summary
Definition of the landscape	Predefined
Criteria for definition	Traditional territory (<i>Dheeda</i>)
Authority and governance powers	Advisory
Governance by whom	Communities (Gomole Rangeland Council)
Form of participation and representation	Representation by rangeland committee representatives within Gomole)
Multi-level planning approach	Planning mostly done above and below landscape level.
Involvement of women	Women have direct representation on the Rangeland Council at Arda level

4.1.2 Definition of the Landscape

Action-research carried out by humanitarian organizations in a participatory way with local people play a major role in ensuring that current development interventions are informed by, and pertinent to, local needs in line with cultural norms. Hence, based on the experience gained through involvement of PRIME's leading organization in marginalized pastoral communities both in Ethiopia and other African pastoral areas, they have learned that local resource users have the capacity to adapt to current and predicted climate change effects through appropriate natural resource management. The knowledge gained by PLI II project, was an important milestone for the formulation of PRIME project, to fulfill gaps observed in development intervention, and for securing pastoral livelihoods against external shocks.

The current initiative was based on customarily defined rangelands that the Borana people used to manage pasture and water in the past. In line with this, Gomole *Dheeda* was selected as a pilot project to build resilience of pastoral livelihoods through appropriate NRM at landscape level with the experience from Dida Liban, which was one of the two known *Dheedas* under the broad Liban grazing zone, and later planned to be scaled up based on the success of the current project.

So far through participatory resource mapping and community dialogue, resources were identified and digitized. After about four decades of decline in their rangeland management role, the customary institutions for NRM were rebuilt. The currently institution has three structures: *Arda/PA*, *Reera* and *Dheeda*.

4.1.3 Authority and Governance Powers of the Landscape-level Institution/Process

The instituted Gomole rangeland council is not yet recognized by formal government.

To this end, the current landscape management committee has an advisory rather than a decision-making role. As Gomole stretches between two woredas, it is largely governed by the respective woredas, and the community member is represented through the kebele where he resides. From the government woreda structure, the Pastoral Development Office takes a leading role in planning for development. According to the FGD made with elders, in reality the PA leader represents the formal government at community level and holds the power of decision-making at the grass-roots level. Thus, there is fragmentation in management as decisions are made within respective PAs without the consideration of holistic approaches provided by the landscape management committee. The underlying reason for such fragmentation is due to the lack of recognition of the management committee by government. This demands a critical examination of its implications on the dryland ecosystem by all concerned entities if we hope to reverse and protect further degradation. On the other hand, the decision making power of the newly instituted management committee, particularly at the lower level (arda/kebele), is influenced by the PA leader. This is due to the fact that the PA leader is politically empowered, as a member of water and pasture management committee and a member of the newly instituted committee at the arda/kebele level. Therefore, according to the current practices of rangeland management, the approach is so fragmented that the lack of coordination among different kebeles exists.

Watershed management is the current nationally designed natural resource management effort. Despite the existing difference between the highland and lowland livelihoods as well as environmental characteristics, the community is mobilized for participation in watershed management planning at the same time. Community members a FGD in Arero Woreda explained that such national initiatives towards NRM are problematic particularly in dryland areas as the planned watershed activities were not adapted to the pastoral activity calendar. The root cause is a lack of user participation in planning for the activity which resulted in a lack of motivation by the wider community that brought poor performance in the studied area.

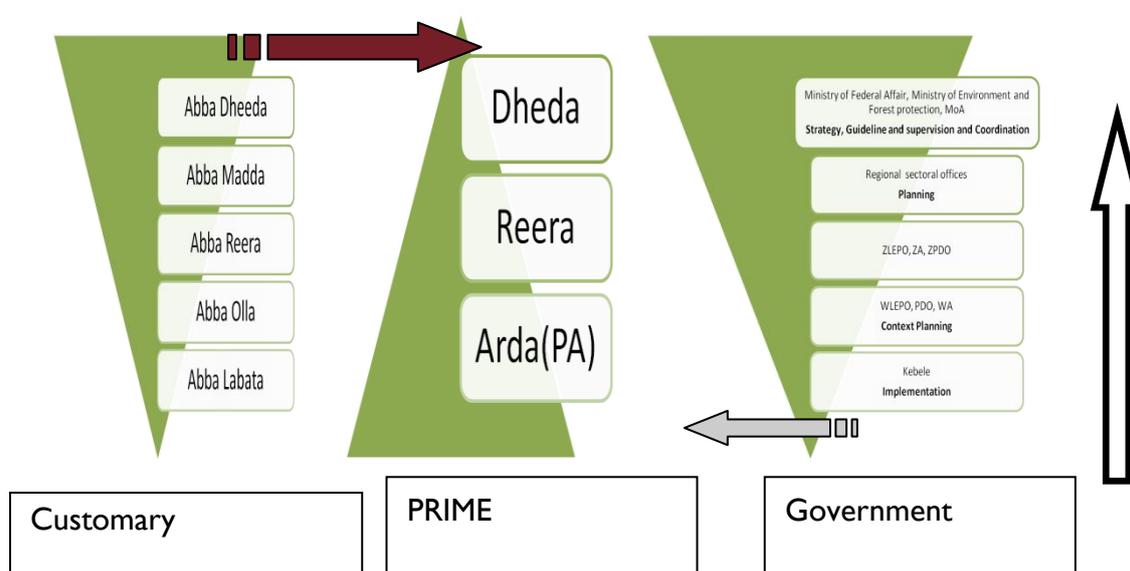


Fig. 2: The interaction of customary and government decision-making systems

According to the above figure, whereas the *Abba Dheeda* has a prominent role in decision-making, as it was in the customary system, the PA level pasture committees have the major role irrespective of PRIME's effort in revitalizing customary institutions. Currently, the government-instituted water and pasture management committee locally known as *Koree Dheeda* is deciding on communally-owned

resources that sideline elders at the local level. The PA leader and the Abba Gare are important government agents who mobilize local communities in implementing what is planned at the region and woreda levels, especially on NRM. Therefore, there is very little planning power at the landscape level. Planning power primarily resides rather with the region. In addition, power for context planning is at respective woredas with implementation done through respective PAs. The power of decision making on the use of water and pasture at the local level resides with the respective local grazing committees which is exclusively made up of PA leaders, Security and Administration officers, Development Agent (DA) and PA managers. The decisions made at local level by this pasture and water management committee often do not recognize grazing route/direction. Such shift in decision-making on communal resources is perhaps now contributing for the continual degradation of rangeland productivity by replacing customary institution in the management of the same.

On the other hand, in terms of the customary NRM practice, the *Dheeda* council headed by the *Abba Dheeda* has a prominent role in managing patchy resources at a given rangeland unit. Across and within landscapes, specific management decisions were made by key actors involved in customary structure. This traditional wisdom and the customary structure have undergone a loss of importance and strength mainly due to external factors that were mentioned in the Introduction.

Today, land fragmentation is a result of modern administrative structure, expansion of non-pastoral livelihoods, private enclosure by pastoralist themselves and the widely observed bush encroachment in the studied rangeland unit, and is seriously undermining rangeland productivity. Mobility is one of the main pastoral strategies to access and use resources as well as an effective environmental management and risk minimization response, even though some local government workers see it as an unsophisticated and labor intensive strategy.

Government workers having this perspective who were interviewed for this research said that what they want is to modernize pastoralists by settling them in a village, limiting their livestock and adopt another livelihood via diversification. Other officials, however, appreciate the local custom and structure in supporting NRM. If there had been no such effective management systems and resource sharing culture by the local communities, the impact of climate change will be at its worst scenario. The group which supports the latter view wants to work with local people in supporting the effort of revitalizing the *Dheeda* level management system. According to this group, the local problem that has been undermining pastoral livelihoods is mainly attributed to changing land use and the absence of public policy that supports pastoralism. Such understanding by government representatives is a good opportunity that should be harnessed by PRIME and other development stakeholders.

4.1.4 Governance by whom?

As mentioned previously, the currently instituted structure for the Gomole Rangeland Council has three structures: *Arda/PA*, *Reera* and *Dheeda*. At PA level, there are eight (8) committee members including a PA leader, security and administration officer from the government structure, 1 or 2 women representatives, and four elders selected through community dialogue facilitated by PRIME. PRIME has called 3-5 individuals from the entire Gomole PAs/Ardas to Yabello in order to institute a Gomole *Dheeda* management committee. At that meeting, representatives for each stage, *Arda*, *Reera* and *Dheeda*, were selected as representatives. This management committee is intended to have a full management role in planning and deciding on the landscape, but when the field work for this particular study was done, the committee was at its initial stage so there are a lot of issues that need resolution to make it fully functional.

4.1.5 Multi-level Planning Approach

According to the Federal Democratic Republic of Ethiopia (FDRE) Constitution, sectoral and ministerial offices are responsible for developing a guideline that directs regional offices in

accordance with federal offices. Regional sectoral offices, on the other hand, are responsible for setting a plan. After planning is made at this level, the sectoral plan will be given to each zonal office. The discussion made with woreda line departments has revealed that context planning according to the local livelihood type is done by woreda core offices together, which is made up of Pastoral Development Office (PDO), water office, women and youth, education office and land and environmental protection office. Local communities will then consult through respective kebeles being mobilized by the kebele leader for plan implementation. This very 'top-down', legal approach to resource management fails to recognize the community's priority needs as per the discussion made with community groups. Nevertheless, the current effort done by PRIME has now started to reverse such technocratic planning toward a more community-based planning by instituting a Dheeda management committee for the Gomole rangeland unit. According to the discussion made with local communities, they have shown their appreciation and full support, which is input for the realization and achievement of project goal.

The Government has instituted a *Koree Dheeda*, a decision-making committee on rangeland management at each kebele. In cases where elders are part of the *Koree Dheeda*, they are often influenced by the kebele leader. As it was founded by the local government, it holds full power to decide on use and conservation at its own kebele.

Traditionally, management decisions were made at the following five levels: *Dheeda*, *Madda*, *Reera*, *Olla* and the *Labata*. Every decision was made across the customary structure, and was related to each other. Resource managers are related by their defined responsibilities. At a higher level, it was managed by the *Abba Dheeda* and the *Madda* council. At mid level, the respective *Abba Reera* with *Reera* elders were passing decisions on communally owned natural resources, decisions on dividing *foora* from *warra* herds (dry herds and milk herds, respectively) and which ollas should move. At the olla level, decisions on daily grazing direction were made.

Across Dirre grazing landscapes, based on the availabilities of water and its inherent environmental condition, three of the rangelands namely, *Golbo*, *Malbe* and *Wayama*, were allocated for the rainy season grazing area, while Gomole and Dirre were largely a reserves for the dry season. Within a given landscape, the community plans on how to use the rangeland at the *Reera* level. The *Abba Reera* gather resource users. At the *Reera* level, the community divides the rangeland into dry reserve areas and rainy season grazing areas. For water management, the *Abba Reera* nominates an *Abba Herrega* (lit. "father of the watering regimen). For daily water management, *Abba Herrega* plans and nominates an *Abba Guyyas*. The *Abba Reera* then mobilizes the community to demarcate the identified drought reserve areas which is then strengthened by administering strict community bylaws. At the upper stage or *Dheeda* level, the *Abba Dheeda* gathers both *Abba Reeras* and *Abba Maddas* right after the short rainy season for a discussion on resource statuses, and elders update the *Abba Dheeda* based on who did and did not dispose his obligation. Then, the *Abba Dheeda* makes suggestions as to changes to the *Abba Reera*. *Abba Madda* also updates the *Abba Dheeda* on the strength and weaknesses observed on water and pasture management.

Since it is in its infancy stage, the newly instituted rangeland committee is not fully operational. PRIME is assisting the committee by providing capacity building, and facilitating continual discussions through interaction with the modern governance structure. At *Reera* level, the committee is planning to identify wet and dry season grazing areas by utilizing a similar method which has been used in the past. In addition, the *Abba Dheeda* will chair a meeting by gathering all the *Reeras* every six months after the short *Hagayya* rainy season. At this meeting, they provide an update on resource statuses and plan on how to use and conserve this scarce resource.

Despite PRIME's effort, the decision made by the committee is not respected. It was learned that the possible reasons could be that in determining the *Reera*, the local community uses some sociological factors, such as marriage and funeral ceremonies which lead to the amalgamation of different nearby *Ardas* which was not initially followed by PRIME while establishing *Reeras*. According to discussions

with the community through FGDs and KIIs, in the past there were about five *Reeras* in Gomole. According to the new arrangement, there are about ten *Reeras* which could raise at least two issues within the local communities. The first issue has to do with the number of managers, and the other is related to the conception and construction of the word *Reera* itself (see Section 5 for a discussion of the implications of this). In addition, the structure itself is not compatible with the traditional one. More than the other structures, *Madda* level, which was missed by PRIME, is a very important customary institution that the communities have used for sustainable rangeland management in the past.

4.1.6 Involvement of Women

According to Borana tradition, women indirectly participate in decision making within households through discussions with their husbands. However, women are part of the management committee at the *arda/kebele* level in the newly instituted *Dheeda* level rangeland committee.

Women, and pastoral women in particular, are more vulnerable to the negative impacts of resource mismanagement because pastoral women take on more of the work load. Beyond their roles as mothers, they also take on the lion's share in the overall family management of the household assets and have a greater participation in community development, such as watershed activities and other social works.

However, discussions carried out with traditional leaders have revealed that they are willing to consider participation of women within leadership roles for NRM. The FGD comprised of women, also showed that as a result of current resource degradation, that they are disproportionately affected because they often have to travel more than 3 hours for a single trip to collect grass for their newly-born livestock and other weak animals particularly during the dry season. When they return to their home, these women often have other housed responsibilities waiting for them such as the preparation of food, caring of children, washing, and etc.

If by “participation” you are asking about women’s participation, we are more participating in different meeting now. -Jilo.

But, Elema, one of the FGD participants, acknowledged PRIME's efforts in terms of the per diem payment she received. Previously, though women did not go to such meetings, they were consulted by their husbands and elders who were in charge of effectively managing the resource base. Community bylaw is strictly adhered to in day-to-day life and accepted as *Hamaa Mudammuddii* so that breaking rules was uncommon. But, now due to weakening of the customary institution, natural resources are affected, and women in particular are receiving the impact. She makes the following suggestions for better rangeland management, and is quoted as follows:

... we were able to get grass at near distance. But now, resource is degraded in much faster than ever before due to poor management and absence of rain. What we choose is clear and simple. Elders should be heard as they know much more than the current practices by formal managers. -Elema

4.2 *Difference in Opinion among Government Officials on Customary NRM*

There are different perspectives among the various government staff on customary ways of managing natural resources. One view asserted that the local culture of sharing resources like Busa-Gonofa and the local structure for NRM are well appreciated as they reduce the negative impacts of climate change even if they are assisted by the government. Others, however, hold a view that the deterioration of natural resources, overgrazing and population boom (both human and livestock) are due to the inefficiencies of the local structure. According to Davies et al. (2012), many traditional land management practices have proven to be more economically viable than more ‘modern’ alternatives, whilst simultaneously providing conservation benefits. The ecological rationale of these traditional strategies developed through a deep understanding by the indigenous communities of their surrounding natural environment ensures both economic and environmental sustainability. The drylands perhaps more than any other biome offer opportunities for achieving both conservation and development objectives simultaneously and in many cases have shown to do so.

4.3 *Existing Opportunities for Better NRM*

Despite many challenges, there are also opportunities for better NRM in the studied area. In community members’ minds, the existence of the community structures in combination with traditional wisdom is believed to be a good opportunity that demands special attention in order to protect resources from further degradation. Over the last couple of decades, the importance of enabling the participation of local communities in planning and implementation has been recognized by policy makers and practitioners. All major conventions and policy statements refer to people’s participation as the basis for sustainable and equitable development. The current processes of democratization and decentralization are now giving the issue greater edge.

1. The Federal Constitution, under **Art.52(2) (d)** Regional States shall have the powers and functions to ; *“administer land and other natural resources in accordance with the federal laws”* and hence provides that the administration of rural land is the prerogative of the National regional States.
2. Furthermore, the other relevant Constitutional provision regarding NRM is **Article 92** in which Ethiopia’ national policy and principles on NRM is indicated. The cited Article, under the title Environmental Objectives states *“1. The design and implementation of programs and projects of development shall not damage or destroy the environment. 2. People shall have the right to full consultation and to the expression of views in the planning and implementation of environmental policies and projects that affects them directly”*.

The definition of Powers and Duties of the Executive Organs of the FDRE *Proc. No.471/2005* shows that there are a number of institutions with authority, powers, duties and responsibilities related to NRM, such as the Ministry of Agriculture and Rural Development, The Ministry of Federal Affairs, and The Ministry of Environmental and Forest Protection are the most important institutions at the Federal Government Level. In cases where conflict arises on grazing lands in border areas, the Ministry of Foreign affairs has a role to play. Except for the Ministry of Federal Affairs, there are offices or departments responsible exclusively attending to the issue of Pastoralists in the National Regional State of Oromia. Regional Government institutions relevant to NRM are the Zonal Administration, offices related to pastoralist, women and youth affairs and environmental protection at the Regional and Zonal levels, Woreda Administration and related stakeholders, and Kebele Administration. All these institutions have important roles to play in assisting the implementation of effective NRM policy.

4.4 Role Overlap in NRM Decision

According to the federal proclamation, PA (kebele) is the smallest unit of modern governance structure. PA leaders are very important for mobilizing local communities in implementing government policies. As to Borana tradition, elders at *Madda* level are important in deciding if someone from another *Madda* can be permitted to use the resource. The rationale behind this is because water is one of the primary tools for pasture management. Based on the available resource and incoming livestock, decisions are made in a rational way. But now even if elders say no, those who came from another *Madda* go to the PA leader in order to get access rights.

4.5 Communal NRM and Decision-making in Borana

Klls conducted with local people have commonly pointed to the great awareness among the Borana of the importance of natural resources. A key aspect of the Borana customary NRM system is that it involves a series of critical debates, consultations and consensus as the basis for decision making. The system incorporates robust rules and regulations to ensure sustainable NRM through wise utilization and protection of the delicate rangeland resources.



The livelihoods of the Borana are highly dependent on livestock and natural resources such as natural pastures as key financial and natural capitals, respectively. This could be evidenced by two proclamations, made as part of Borana's overall customary governance – the *Gada* system. Both proclamations were approved at the *Gumii Gaayoo* – the general assembly of the Borana which is held every eight years.

Gumi Gaayoo is an overall assembly where key livelihood issues in general and NRM issues in particular are addressed. The assembly deals with underlining issues, creation of new laws while strengthening existing strong ones, and the correction or amendment of weak laws. Generally, NRM takes place at various levels through the customary system, and related plans and decisions are made in a participatory manner.

The first land and environmental proclamation was officiated approximately five centuries ago, during *Arero Boru Bakalchaa*, the 6th *Abbaa Gadaa*. The second proclamation on forest protection and conservation, known as *Seera Daawwee* or *Daawwee's law*, was proclaimed three centuries ago through *Gumii Gaayoo* assembly conducted during the 31st *AbbaaGadaa*, *Daawwee Gobboo Yaayyaa*. It was understood from Klls that the first proclamation was mainly concerned with setting up multiple rangeland management institutions whereas the latter was focused on livestock management and wildlife protection. *Seera Daawwee* included proclamations on proper management of domestic animals like mules, horses, donkeys, cows, and dogs and all wild animals.

It was learned that this particular *Seera Daawwee* event was often accompanied by hot agendas and debatable issues. Some issues initially seemed somewhat difficult to reach consensus; for example, the above proclamation was established after the assembly was held for six consecutive months at locality called *Doolooloo Makkalaa* 10 km south of Mega town.

In an interview, the Hayuu Borbor Bulee said that since the second proclamation no reinforcement proclamation have been prepared; the Borana have been exercising the proclamations without the need of any further compulsion. However, this tendency was weakened as time went on with the gradual decrease in the functionality of *Gadaa* System due to various interferences. Even though the

informant believes the system has remained rather intact to date and represents a better NRM option.

5 Discussion

To attain better livelihood outcomes, local pastoral communities rely on multiple strategies to manage their livestock effectively. Their livelihood strategies have evolved over centuries in response to the local environment. The Borana's key strategies include a *Dheeda* level institution for managing natural resources, and maintaining high levels of mobility within and across landscapes to make the most effective use of scarce resources (Desta et al., 2008; Markakis, 2004). These sophisticated and dynamic strategies have allowed them to cope with the threats and risks that characterize a dryland environment and to maintain a viable production and livelihoods system.

Effective natural resource management in drylands demands a deep understanding of environmental characteristics and the complex nature of pastoral production system. Changing land use is significantly affecting the inherent potential of the services that rangeland ecosystems can provide due to the weakening of *Dheeda* level management. It was understood that, despite the fact that dryland areas such as Gomole are by nature characterized by many environmental challenges which limit livelihood opportunities other than pastoralism, government policies and development planning do not coincide with these characteristics.

Gomole rangeland is one of the five customarily defined rangelands within the Dirre plateau in the Borana zone of southern Ethiopia. According to the data from Borana Zone Land and Environmental Protection Office, it is the third largest rangeland unit. The PRIME project aspires and works to decrease vulnerabilities of pastoral livelihoods by harnessing all existing opportunities through appropriate resource management and creating market linkages for pastoral products by working with all stakeholders. According to the discussion made with different community groups, they hold confidence that *Dheeda* level management could improve the resource base and utilize the benefits of the PRIME project, but they have doubt of its success. They feel that the success of *Dheeda* management depends on a number of factors such as separation of political administrative units from NRM, empowerment of the current *Dheeda* management committee, ownership rights over the landscape and the cooperation of all stakeholders.

In an effort to revitalize customary institutions, as discussed in the previous sections, *Madda* was missed at its initial stage. As per the discussion made with elders, water and settlement patterns were used by the community in the past. *Madda* council holds more power than *Abba Reeras* for the rational use of water and its surrounding grazing areas. Moreover, the council as a customary management and decision-making organization evaluates the *Abba Herregas* and *Abba Reeras* on an annual basis, and the *Abba Dheeda* takes the necessary correction. The fact that, as long as *Dheeda* level NRM is an integrated way of resource management as per the customary one, such observed discontinuity in the management role of the current initiative should be corrected.

This study has noticed that the natural resource which is the foundation of local livelihoods is under continual deterioration and its impact is vivid. There are many reasons behind this continual deterioration: top-down and sectoral based development planning, lack of true power devolution, absence of pastoral oriented policy package and low skills of NRM practitioners at the grassroots level are the major ones.

The resultant effects on natural resources of the root causes previously mentioned are having a major impact on peoples' livelihood, trapping them in poverty by making the poor poorer and the rich richer. The politicization of people's participation and government control in decision making on communally owned natural resources by the local elite has now not only sidelined elders, but is also a critical challenge for the current initiative; thereby making the problem worse than ever

before. Despite NRM and local livelihood demanding a holistic approach, the current sectoral planning and fragmented kebele structure is making cooperation more difficult among development partners as well as the community; all of which will bring more challenges upon the current initiative as well as on any future development endeavors.

The absence of a participatory approach in resource planning in the studied area has resulted in silence from those who manage these same areas. It was understood that this silence has brought about a poor motivation level on the part of local resource management and frustration by the resource users resulting in poor performance by the modern NRM entities while resource degradation continues.

Whereas, characteristically, natural resources in dryland environments are found in pockets and distributed unevenly, local people have been managing it through landscape-level customary institutions by using their distribution as a key strategy in an integrated manner. For example, the distribution of water sources across and within *Dheeda* are an important tool that has been used by Borana pastoral communities in rangeland management through multilevel decision making and resource planning in the past time.

The current rangeland council in Gomole, the creation on which was facilitated by the PRIME project, has no power to enforce community bylaws on the landscape as it ought to be according to the previous customary institutional arrangements. As of today, the primary challenge is that the formal governance system has not acknowledged the current instituted rangeland council. The other observed problem has to do with different ethnic groups who live within the rangeland and have been challenging the implementation of the decisions made by the Gumi Gayo assembly for the newly-innovated line resettlement for better natural resource management. These other ethnic groups—Guji and Gabra—did not respect the rule as the rule is decided exclusively by the Borana because of the differences in their settlement culture as well as their livestock species preferences. For example, the Guji settle by single household, while the Borana settle by cluster Olla. Also the Gabra prefer camels, whereas the Borana prefer cattle. Therefore, according to Borana customary landscape management, landscape suitability for particular species preference was a key strategy in dividing those rangeland units as per their inherent potential and their categorization. For example, from cattle dung grass grows whereas from camel dung bushes will grow. To combat such problems among local resource users, there needs to be a continual dialogue among all the stakeholders and development actors should provide assistance. Also further research should be done in amalgamating indigenous knowledge and scientific findings on landscape suitability for livestock production as per the inherent landscape natural resource base to minimize value differences and its conflict among resource users.

Despite a number of past development interventions by many development agents in the studied area, the majority of local people remain trapped in widespread poverty primarily due to the wrong development approaches being followed. Hence, there is a need for landscape/*Dheeda* level NRM that can overcome past drawbacks of the inefficient approach for inclusive management. At its most fundamental, a landscape approach to natural resource management is one in which management decisions are designed at multiple levels to ensure that underlying biophysical processes can support the environmental, economic and social values that society identifies for that landscape over time. Institutionally, it requires mechanisms to identify and resolve conflicting societal values for particular landscapes.

In revitalizing the customary institution by PRIME, some issues like, what makes a *Reera* a land unit lacks complete understanding. This has contributed to the formation of more *Reeras*, and around eight kebeles were included in two to three *Reeras*. This was one of the issues that forced the community to hesitate as if it were similar with their original *Reera*. Moreover, the community was not happy with such a large number of managers. They raised one fact, that it is easier for two people to reach an agreement than three individuals to do so. Consequently, many lessons should be drawn from the current initiative for the next plan.

According to the centuries old, but effective customary structure, at each level, there are known key actors and specific types of decisions to be made. During that time community rules and regulations were known as *Hamaa Mudaamuddii* that everyone knows, fear breaking it and know they should respect it. On the other hand local leaders were also obligated to the binding community bylaws and should exercise their known authority and an evaluation of their role was made on an annual basis. The wrongdoer, across the entire structure to the top *Abba Gada*, will lose, and the power will be given to another person. This principle is founded in the modern democratic culture as *Principle of Recall* so that everyone is under law.

It is impossible for the federal government to legislate for every issue particularly on NRM. Perhaps, the studied communities have a centuries-old *Dheeda* level management institution that has been effectively managing patchy resources. Constitutionally, the Regional Government of Oromia has the mandate to strengthen and promote the customary institution, but at the same time, local people also have the right to be consulted and involved in the decision-making process as to how they should be equipped with the skills to plan for their own development and sustainability outside of any specific project context. Participatory processes have been widely used by development agents to seek community endorsement for the activities for which they have funding, rather than clear community engagement in the past few decades. On the other hand, institutions are needed that allow the participation of resource users that enables community groups to identify their own priorities and management strategies to be incorporated. A *Dheeda* level NRM institution is the appropriate approach and scale that can provide such opportunity and promote sustainable development by bringing integrated NRM theory into practice. As an approach to NRM, landscape approaches try to uncover issues that are below the surface, such as what people value, and why as well as the necessary tools to build a true partnership. Thus, government and other stakeholders should change their decision making roles for the facilitation of the current PRIME initiative.

Table 6: Recommendations

<i>Recommendation</i>	<i>By whom?</i>
Facilitating for continued dialogue between government and local people	PRIME
Capacity building for community through different training and assisting community for better NRM	PRIME
Scaling up the current effort to the other rangeland units	PRIME
True power devolution for users' participation in all planning levels	Local government
Building a partnership with the local community, and other stakeholders and adopt <i>Dheeda</i> level management system	Oromia Regional Government

This study concludes that in order to protect further deterioration of natural resources in Gomole and other rangeland units, local people and *Dheeda* customary institutions should be promoted for better NRM that helps to create resilient pastoral livelihoods in the changing climate. To empower customary institutions for sustainable NRM, *Dheeda* level land certification is a necessary criterion

that should be fulfilled to protect further environmental degradation. Utilizing the landscape approach helps land managers to better understand the (biophysical and human) context of issues. It also helps them to identify and implement management actions which maintain biophysical processes and resources, as well as minimize conflicts between different management responses and indifferent interests among resource users.

The current effort by the current initiative should also be scaled up to the other rangeland units where sustainable rangeland for improved livestock productivity is concerned. Since the sustainability of Gomole depends on the careful management of the other rangelands at similar levels, which, I would argue, is an achievable goal for decreasing pastoral vulnerability in dryland areas as a long-term development intervention package.

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